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Attorney Docket No. 84341  
Client No. 638939US:GMT

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RBN  
11/27/07

## **SUBSTITUTE SPECIFICATION**

### **CHAIR WITH SEAT PROMOTING GOOD POSTURE**

#### **Field of the Invention**

[0001] The present invention relates to chairs and, in particular, to a chair which actively supports good posture.

#### **Background of the Invention**

[0002] The human body is not well designed for sitting for prolonged periods, yet modern work patterns and lifestyles require us to do just that. When seated, most of the body weight is supported on two pointed bones which form the base of the pelvis. These bones are known as the ischial tuberosities. In the seated state, the pelvis is inherently unstable - it is rather like a triangle balanced on its point.

[0003] When seated, the weight of the body trunk, supported by the spine, tends to rotate the pelvis backwards, pushing the spine into a c-shaped curve known as kyphosis. The buttocks then tend to slide forward on the seat, reinforcing the c-curve in the spine.

[0004] If the spine is in kyphosis, pressures within the discs of the spine increase very markedly, which will lead to degenerative changes over time, potentially causing severe pain. In addition, with the spine in kyphosis, the rib cage cannot readily expand, nor can the diaphragm move downwards fully. Hence, respiratory efficiency is greatly reduced, which in turn affects many body functions dependent upon blood oxygen levels.

[0005] Good posture is important because it minimizes the risk of back pain and improves respiratory efficiency. Various approaches to chair design have been adopted with the aim of encouraging correct seating posture.

[0006] These existing designs include the "kneel" chair, popular in the 1970's and 1980's, which supports the buttocks on a surface inclined forward at approximately 30 degrees and